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PROVISIONAL SPECIFICATION.

Methods of and Means for Applying Electricity to the Human Body.

I, FRANK DOWLING, of Marie Villa, 23, Mayola Road, Lower Clapton, in the County of Middlesex, Engineer, do hereby declare the nature of this invention to be as follows :—

The object of my invention is to provide improved electric appliances to be
5 attached to, or form part of belts, corsets, or under-garments, or which may be worn independently of either, by persons of either sex, and by means of which electricity may be obtained for curative or other purposes, in a simple manner.

In carrying out my invention, I avail myself of static electricity and use a non-conducting material upon which it is well known that electricity may be obtained
10 by friction, and I arrange that the necessary friction may be obtained by the movement of the body of the wearer.

For the purposes of my invention, I use discs, rods, or sheets of a convenient size and shape, composed of ebonite, amber, sealing-wax, glass, ivory, shellac resin, caoutchouc, or gutta-percha, or any good electric compound, such as a mixture of
15 shellac, gum-mastic, Venice turpentine, and marine glue.

In practice, I prefer to use ebonite discs, rounded on the edges, except in some cases where a flexible material is more suitable.

My appliance for wearing next to woolen or silk under-garments may consist simply of a disc or sheet of ebonite, or other non-conducting material mentioned
20 above, provided with elastic bands or cords capable of being attached to the under-garments, or suspended from the body of the wearer in such a manner that friction may be set up between the non-conducting disc or sheet and the under-garment in consequence of the various movements of the body of the wearer.

In order to make my appliance self-contained, however, I prefer to enclose an
25 ebonite disc in a case of leather or other suitable material, somewhat larger than the disc and provided with one or more openings on one side.

I insert a flannel or silk pad in this case, so that the disc will be free to move about in the case and rub upon the pad, and to facilitate this movement I may suspend the disc in the case by elastic cords. This appliance is provided with
30 elastic bands for attachment in the same manner as hereinbefore described, and one or more of these appliances may be worn in any desired position.

In forming an electric belt according to my invention, I provide a number of these discs, which I couple together or attach separately to a suitable band preferably of an elastic material and I fix a number of flannel or silk rubbers under
35 these discs in such a manner that friction may be caused between the rubbers and discs when the band or belt is expanded.

In the same manner I form an appliance specially suitable for ladies by the attachment of a number of discs to a corset instead of a belt, but I may prefer to use a flexible material such as hereinbefore described, in place of ebonite discs.

40 The discs or sheets as hereinbefore described may be perforated with a number of holes, and sometimes I fix a metal plate on one side when it is not used as a rubbing surface.

It will be readily understood that rods, rollers or rectangular sheets of any of the above materials may be substituted in place of discs for the purposes of my
45 invention.

In some cases I provide sheets of tin-foil and parchment between the flannel or silk rubber and the material to which it is attached but this is not essential.

[Price 8d.]

Dowling's Methods of and Means for Applying Electricity to the Human Body.

In electric belts, corsets or appliances constructed according to my invention, as hereinbefore described the discs are further excited by the rubbing contact between them and the under-garments or the skin of the wearer as the case may be.

Dated this 23rd day of May 1893.

FRANK DOWLING. 5

COMPLETE SPECIFICATION.

Methods of and Means for Applying Electricity to the Human Body.

I, FRANK DOWLING, of Marie Villa, 23 Mayola Road, Lower Clapton in the County of Middlesex, Engineer, do hereby declare the nature of this invention 10 and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement :—

The object of my invention is to provide improved electric appliances to be attached to, or form part of, belts, corsets or undergarments, or which may be worn 15 independently of either by persons of either sex and by means of which electricity may be obtained for curative or other purposes in a simple manner.

In carrying out my invention, I avail myself of static-electricity and use a non-conducting material upon which it is well known that electricity may be obtained by friction, and I arrange that the necessary friction may be obtained by the 20 movement of the body of the wearer. For the purposes of my invention, I use discs, rods or sheets of a convenient size and shape composed of ebonite, amber, sealing-wax, glass, ivory, shellac, resin, caoutchouc or gutta percha ; or any good “electric” compound such as a mixture of shellac, gum-mastic, Venice-turpentine & marine glue.

In practice, I prefer to use ebonite discs rounded on the edges except in some 25 cases where a flexible material is more suitable.

My appliance for wearing next to woollen or silk under-garments may consist simply of a disc or sheet of ebonite or other non-conducting material mentioned above, provided with elastic bands or cords capable of being attached to the under- 30 garments or suspended from the body of the wearer in such a manner that friction may be set up between the non-conducting disc or sheet and the under-garment, in consequence of the various movements of the body of the wearer.

In order to make my appliance self-contained, however, I prefer to enclose an ebonite disc inside a case of leather or other suitable material somewhat larger than the disc, and provided with one or more openings on one side. In this case I 35 insert a flannel or silk pad so that the disc will be free to move about in the case and rub upon the pad, and to facilitate this movement the disc may be suspended in the case by elastic cords. This appliance is provided with elastic bands for attachment in the same manner as hereinbefore described and one or more of these may be worn in any desired position. 40

In forming an electric belt according to my invention, I provide a number of these discs, which I couple together or attach separately to a suitable band preferably of an elastic material and I fix a number of flannel or silk rubbers under 45 these discs in such a manner that friction may be caused between the rubbers and discs when the band or belt is expanded.

In the same manner, I form an appliance specially suitable for ladies by the attachment of a number of discs to a corset instead of a belt, but I may prefer to use a flexible material, such as hereinbefore described, in place of ebonite discs.

The discs or sheets, as hereinbefore described, may be perforated with a number of holes & sometimes I fix a metal plate on one side when it is not used as a 50 rubbing surface. It will be readily understood that rods, rollers or rectangular sheets of any of the above materials may be substituted in place of discs for the purposes of my invention. In some cases I provide sheets of tinfoil and parchment

Dowling's Methods of and Means for Applying Electricity to the Human Body.

between the flannel or silk rubber and the material to which it is attached, but this is not essential.

In electric belts, corsets, or appliances constructed according to my invention, as hereinbefore described, the discs are further excited by the rubbing contact between
5 them and the under-garments, or the skin of the wearer, as the case may be. In some cases I dispense with the rubbing pads & rely upon the friction between the discs and the under-garments.

The simplest method of attaching the discs to belts, corsets or undergarments is to provide two or more holes in the centre of each disc, so that the discs may be
10 sewn on where required, like buttons. Or the discs may be provided with a small head, so as to be attached in the same manner as studs, or they may be fixed in any other way which is found most suitable.

In the accompanying drawings,

Figs. 1 & 2 are front and sectional views of a disc provided with holes as
15 already described, and Figs. 3 & 4 illustrate a disc provided with a stud head.

Figs. 5, 6 & 7 are front, side & sectional views of my "enclosed" appliance, as hereinbefore described.

The disc, A. is free to move about in the case C, which is of leather or other suitable material, & has an opening in front. B. is a flannel pad, and D. is an
20 elastic or other band by which the appliance is suspended.

A belt constructed in accordance with my invention is shewn at Fig. 8. Flannel or other suitable pads B. are placed between the discs of ebonite A, and the elastic band C. to which the ebonite discs are attached. The pads are connected by non-elastic bands D. D. and elastic bands E. E. E are provided to keep the flannel
25 pads in position, consequently any expansion of the elastic band C. which forms the belt, will cause the ebonite discs to rub against the pads provided for that purpose.

A modification, in which the partial rotation of the pads is caused by the expansion of the belt, is illustrated at Fig. 9. The rubbing discs B. mounted on a
30 stiff substance are fitted between the ebonite discs A. and the elastic belt C.

The rubbing discs are connected by rigid bands D. so that any alteration in the length of the belt C. will cause the rubbing discs to turn on their centres. If the bands D. are not rigid, elastic bands will be required to keep them in tension as in Fig. 8. The same method of attachment is applicable to corsets, but the
35 bands D & E are dispensed with except in specially modified forms of corsets.

Having now particularly described and ascertained the nature of my said invention & in what manner the same is to be performed I declare that what I claim is:—

1. The application of electricity to the human body by means of appliances
40 worn thereon, consisting of discs, rods or sheets of ebonite or other "electric" material, such as hereinbefore described, and upon which static electricity may be excited by friction.

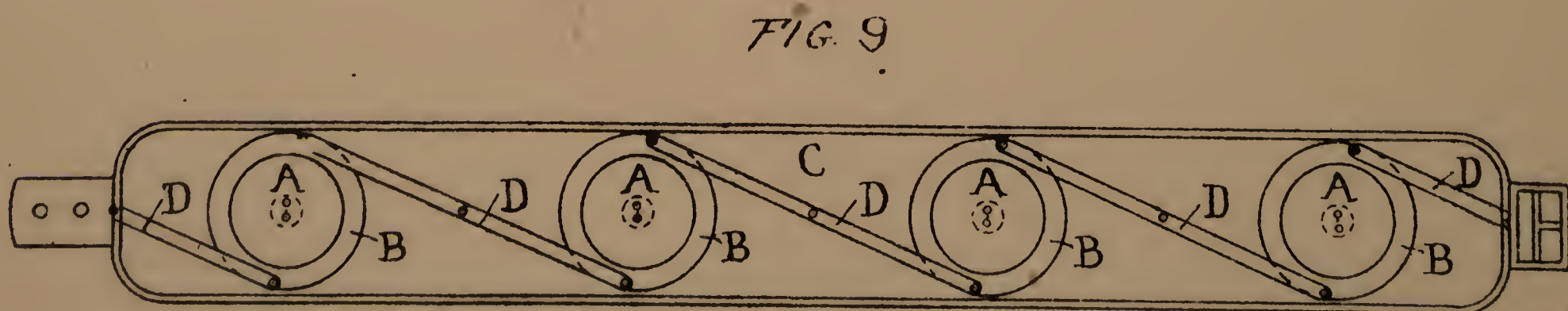
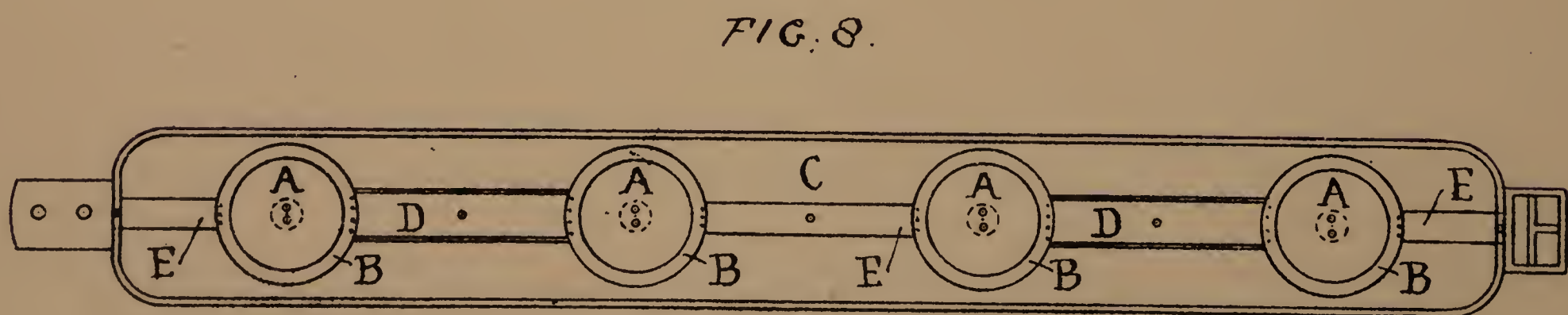
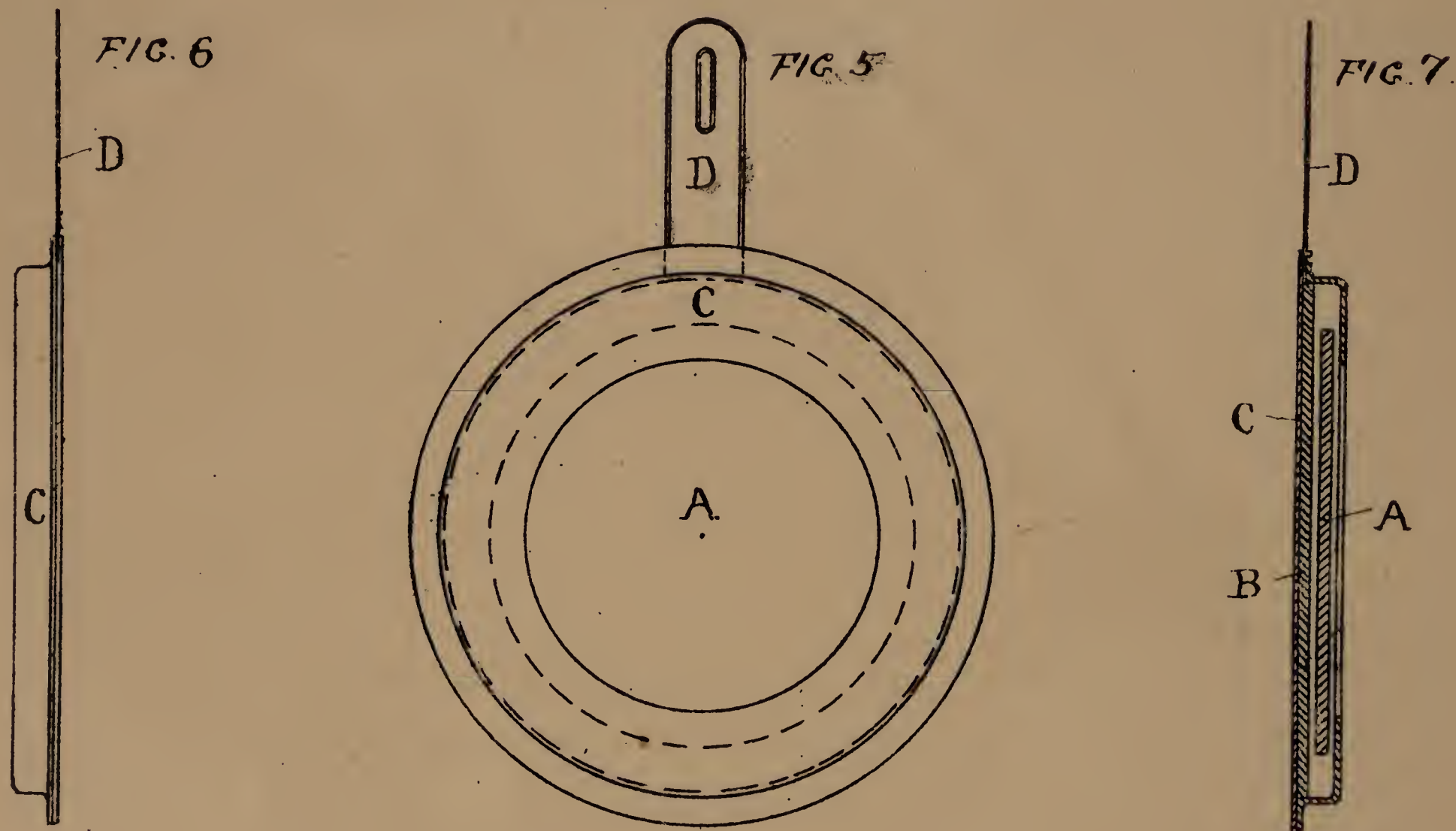
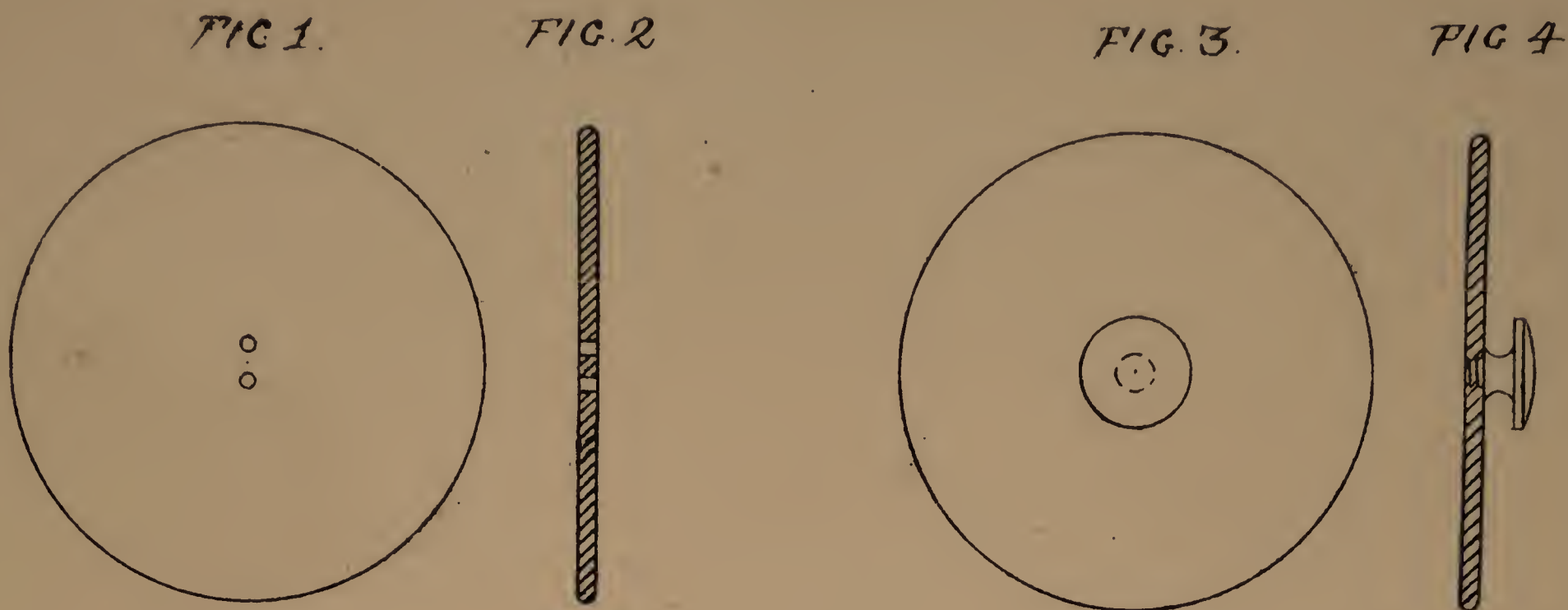
2. The method of excitation of such discs, rods, or sheets, when worn on the human body, by flannel or other pads or rubbers, or by friction against the under-
45 garments or skin of the wearer, substantially as hereinbefore described.

3. The combination of my appliances with belts, corsets, or undergarments, either attached to them, or forming part thereof, as hereinbefore described & illustrated in the accompanying drawings, for the purpose of applying electricity to the human body.

50 Dated this 30th day of November 1893.

FRANK DOWLING.





[This Drawing is a reproduction of the Original on a reduced scale]

